UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

IN RE: BALLY GROUNDWATER CONTAMINATION SUPERFUND SITE

ORIGINAL

Public Hearing in the above matter held at the Bally Firehouse, 537 Chestnut Street, Bally, Pennsylvania, on Thursday, March 22, 2007, commencing at 6:30 p.m., stenographically recorded by Stacie Burns, Court Reporter and Notary Public.

PRESENT: MITCH CRON, Remedial Project Manager
ALICIA WALLS, Community Involvement Coordinator

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MS. WALLS: Good evening. We'd like to get the meeting started.

Good evening. My name is Alicia Walls. I'm the Community Involvement Coordinator for Region 3, Philadelphia. We are here to explain to you our recommendations for Bally's water supply.

First off, I'd like to thank the Bally Borough and Fire Department for helping us arrange this meeting. And I'd like to thank you all for coming out and attending the meeting as well.

We're here, as you know, to tell you about EPA's recommendation for ensuring that the public water supply is safe. In just a moment I'll be turning the meeting over to Mitch Cron. He is the project -- Remedial Project Manager for this site.

But first I'd like to remind you that we are in an official comment period. The period is from March 13 until midnight April 11, 2007. We have copies of our Proposed Plan, which I think everyone received. If not, we have more at the table. You may also access this Proposed Plan and additional site information at this web address.

Also, I'm not sure if everyone received them, but we did have comment cards as well, little cards that you can write notes on if you want to

jot down a question or a comment.

We have a court reporter here tonight who is making a transcript of this meeting. The EPA is required to respond to comments during the comment period and we do this by preparing a Responsiveness Summary. This report summarizes comments we receive and EPA's responses to them. The summary will be attached -- this report, summarized comments we receive and EPA's responses, the summary will be attached to a Record of Decision Amendment that the Region will prepare to document the final selection of a clean-up plan for the Bally Water Supply System. That decision won't be made until the comment period has ended on April 11th. The EPA reviews and considers the comments received.

When it is signed you'll be able to see the Record of Decision online at the website listed as well. You will also find this website and Mitch's information and mine as well as the fact sheets that were handed out or that you received in the mail earlier this week.

Any comments made tonight will become part of the public record. So if you comment tonight you needn't do anything else to make your opinion known. However, if you leave here tonight and think of

something in addition while we are in the comment period, you may either e-mail us or by postal service mail, just make sure if you send it by mail it is postmarked by midnight April 11th.

At this point I'm going to turn the meeting over to Mitch Cron. He's going to give a brief presentation about the Bally Site.

MR. CRON: Thank you, Alicia.

Everyone, my name is Mitch Cron. I'm the Remedial Project Manager. Thank you very much for coming out tonight.

I've done my presentation for Alicia who is the Community Involvement Coordinator and her colleagues, and their response was, it's a good response. It's a good presentation, but maybe it makes sense to do a short version of EPA's plan to address the Bally Public Water System, receive comments and then do a longer version with the history of the Site, history of contamination, discussion of the Feasibility Studies, etc.

I'll start this off with a very short presentation on the problem, our proposal to fix the problem and the schedule to fix the problem. I'll take questions and comments at that time. And there will be a longer presentation, a history, the discussion of

1,4-dioxane, discussion of the Feasibility Study that was performed, etc. Let's launch into it.

This is the Proposed Plan for the Bally Public Water System. Next slide. Here's the short version. As many of you know, Bally Supply Well Number 3 exhibits concentrations of compound 1,4-dioxane. The 1,4-dioxane is from the Bally Superfund Site. The concentration is very low. They do not pose an immediate concern for human health. It may pose a long-term concern for human health. We feel that a response action is warranted to have 1,4-dioxane out of the public water system permanently.

I'm going to use this term a lot tonight. It's second nature because I use it all the time, Potentially Responsible Party. The Potentially Responsible Parties for this Site are the companies that are actually paying for the environmental investigation, investigative work. And I'll detail the Potentially Responsible Parties or the PRP.

The PRPs have completed their feasibility study to determine what's the best way to get the 1,4-dioxane out of the public water supply. The Feasibility Study evaluated two basic options: One, installing of a new well in an uncontaminated location; and the second option of a treatment system to the

current municipal well to lower the concentration to acceptable levels.

EPA has reviewed the PRP study and we determined overall the most probative remedy to address the 1,4-dioxane in the Bally Public Water System is the construction of a new municipal well outside the area of contamination. A new well site has been located and has been tested exhaustively by the Borough. We identified a well site with a very large quantity of water, water of very good quality and a well site -- it's in good protection from the Bally groundwater contamination.

And finally, the schedule to complete this new well is one year, which includes permitting, design activities for the well house and pipeline to bring the water from the well back to Bally and the actual placement of the pipeline and the construction of the well house. The actual well is currently in the ground, very deep, very wide. It's a question now of constructing a well house and constructing a pipeline, purchasing the necessary equipment to operate a well, etc.

So, in summary, in a long story short, that's the problem. That's EPA's proposed solution, and that is a schedule to implement our

proposed solution.

THE AUDIENCE: My name is Steve. I'm with Berks County Environmental Council. What are you going to do with the existing well?

MR. CRON: Municipal Well 3 will continue to pump. The pumping of that well has enacted hydraulic control of the ground contamination by constantly pumping that well. We controlled the extent of contamination. We want to continue pumping that well to protect private wells which lie outside the Borough.

THE AUDIENCE: My understanding is that you have a treatment process that is not fully eliminating the 1,4-dioxane from that well. So you have an option or you've requested a discharge to it into a water body. Why can't you obtain 1,4-dioxane removal?

MR. CRON: I understand your question. Right now the EPA is evaluating discharge appointment for Well 3. 1,4-dioxane levels that must be achieved in accordance with State requirements, the decision of where the discharge is going to be and what treatment will be required has not been made by the agency. We're currently reviewing the available discharge sites and available technology, etc. In the

future we will select a discharge site for the current extraction on Municipal Well Number 3 and we will submit that to the public.

THE AUDIENCE: I would hope that the EPA would consider the fact that the current regulations are based on a 170-pound male adult and there are children that use the water body. And the extraction and concentration that you're allowing to be discharged, take into consideration that it's a fishing tributary and that children use that water.

MR. CRON: I hear you loud and clear, and it will be considered.

Yes, sir.

THE AUDIENCE: If they put the new well on line and the water from that well goes into the existing Bally Borough system, what about the contamination already in the pipes and everything? Is that contamination in the existing lines in the Borough contaminated by this and how do you clean the existing lines up so we can put clean water into them?

MR. CRON: I understand your question. When the current well is disconnected and the new well outside of the Borough is connected to the municipal water system it will take some time. Not a lot of time. It does not affix to the pipes or

reservoir or anything like that. Once we bring in clean water and stop the water with 1,4-dioxane concentration it will in a short period of time return to undetectable levels in a short time.

THE AUDIENCE: Who absorbs the cost of the well? Is that in the government Superfund Site? There's a budget. We're putting a well in Bally. Who is absorbing that cost?

MR. CRON: The PRPs for this Site are absorbing the Feasibility Study, the design of the new well, as well as the construction. They'll absorb these costs.

THE AUDIENCE: I have a couple questions, more to do with the Superfund Site. You were testing the basements in our development last year. I kind of need a time line. When did the Borough -- the Borough first find out that that whole area was a Superfund Site?

MR. CRON: I can tell you almost exactly. In 1982 the EPA sampled Municipal Well 3 and determined that increasing chemicals were present in that well. In 1987 the Site was designated a Superfund Site.

THE AUDIENCE: 1987?

MR. CRON: That's correct.

THE AUDIENCE: What area from Bally to, you know, where the development is, is that development on a Superfund Site?

MR. CRON: The Superfund Site is defined by -- the extent of contamination lies in the Bally Case and Cooler and Bally Engineered Structures. There is a pool of groundwater contamination. The plume lies between the facility and Municipal Well 3 behind the baseball fields in this direction, directly behind the Borough building. Up the hill there's picnic tables.

THE AUDIENCE: And housing.

MR. CRON: And exactly. There are two very large black towers. Those black towers are the air stripper treatment system.

THE AUDIENCE: Technically that Superfund Site would go from Bally Case and Cooler, what used to be that building. Our house lies in line with that well. Would you consider that whole area a Superfund Site?

MR. CRON: I know that area, the extent of the groundwater contamination.

THE AUDIENCE: Is it allowable to build on a Superfund Site? Is it legal?

MR. CRON: I'm not a lawyer. I don't

get involved in that aspect of the Superfund program. My role is really to act as a project manager for the investigation of sites, the cleanup of sites and the long-term effects of the cleanup systems.

THE AUDIENCE: That was going to be my next question. If you do build on that Site, we tried to sell the house a year ago and we obviously have to disclose. We have to give them a stack of papers about that fact, regarding the groundwater contamination in Bally. I'm not -- but we have to disclose that to potential buyers.

My other question would be, I don't know if you can answer this either, would the builder who built that house, wouldn't he have to disclose that to the person buying the house? Would that have to be disclosed to the initial buyer?

MR. CRON: I understand your question perfectly. I don't know the answer. Afterward -- I remember your face perfectly. Stop by. Let's reconnect. Let me get your information and I'll talk to regional counsel. That's a very good question to pose to an attorney who's familiar with environmental and real estate law.

THE AUDIENCE: If you're going to have to pump and clean the water from the old well, is

there any reason why it's not a feasible approach to not go to the new well but clean that and use that? It sounds like double trouble.

MR. CRON: The PRP, I'm going to use that term all night, has evaluated treatment options for Municipal Well 3. They did a good job. They evaluated the universe of technology. They narrowed it down to two oxidizing technologies and they evaluated those technologies in small scale laboratory tests. The concern that the PRP put forth in the Feasibility Study, there is the potential at very low concentration for 1,4-dioxane to break through, which would be very undesirable to the public water supply.

There's also the possibility to create toxic by-products, specifically the treatment technologies created low concentrations of aldehyde and bromate. The two concerns that the EPA has with the treatment is contamination break through at low levels and B, the potential for corrosion of by-products.

THE AUDIENCE: You're going to have the same problem when cleaning the well.

MR. CRON: Those are issues to consider, absolutely. The purpose is to describe the Proposed Plan, how to get the Superfund contamination closed out, aspects of the Site, the discharge point of

the extraction well. There's a lot of things to consider. We'll get -- I'll be back up here to present that as well.

I can go to the longer version, some description of 1,4-dioxane. If you have questions, feel free to ask them.

The long version. A brief history of the Bally Superfund Site. I made the statement it was identified in 1982. As I just indicated the Pennsylvania Department of Environmental Resources collected a water sample. They identified degreasing chemicals. Municipal Well 3 was taken off line after the contamination was identified. Municipal Well 1, which lies near the Bally Ribbon Mill, was brought on line and water for the Borough was brought in by there.

In 1987 Bally Engineered Structures, who had a large factory approximately 200 yards to the west of Municipal Well 3, agreed to perform an environmental investigation of the groundwater contamination, both the extent as well as the source of contamination.

In 1987 the Bally Site became a Superfund Site. In 1989 the environmental investigation was complete. Bally Engineered Structures was determined to be the source of contamination. In '89

the PRPs constructed an air stripper water treatment system at Municipal Well 3. That air stripper treatment system was operated at the well to remove the volatile degreasing agent from the water before it was distributed to the water system or surface.

In 1989 an official decision document was issued. That Record of Decision when you boiled it down was basically to pump and treat water from Municipal Well 3 to maintain control of the groundwater contamination and provide the treated water to the Bally Public Water Supply or discharge to a groundwater supply. That operated between 1989 and 2003.

As many of you know EPA requested that the PRP be asked to evaluate for 1,4-dioxane. They found that was present in the groundwater in the well, in the water treatment system and in the Bally Public Water Supply itself.

That's a brief history of how we got to this point.

THE AUDIENCE: And there were no other contaminants?

MR. CRON: I believe there were five or six volatile organic compounds, trichloroethylene, 1,1,1-trichloroethane, 1,1-dichloroethene, tetrachloroethylene, 1,1-dichloroethane, ethylene

chloride, 1,2-dichlorethane. So 1,4-dioxane is one of the contaminants but it's one of approximately six.

THE AUDIENCE: It might do good to explain the difference between those so they understand how some sink, some float, and how it's used, what is the difference when you treat.

MR. CRON: 1,4-dioxane to start with, volatile TCE is a substance which is heavier than water. When it's released into the environment it sinks below the water table in a pure form. It can create small pools in a subsurface. Those pools are called DNAPLs, denser-than-water, nonaqueous phase liquids. Heavier than water that can pull underground.

1,4-dioxane is different than that. 1,4-dioxane dissolves completely in water. It does not disperse once in water. It dissolves completely.

THE AUDIENCE: By drawing down number 3 to treat it for discharge, what happens to the DNAPLs?

MR. CRON: At this Site we have not evaluated the Bally Engineered Structures site for DNAPLs. I can say to you we've not actually tested for DNAPLs or identified DNAPLs at this Site.

THE AUDIENCE: Isn't there potential for draw down below the cleanup level? How can you

eliminate those contaminants and look at only the one?

MR. CRON: We're in luck. The Region -- this was not on purpose, Kathy Davies is here. She's a hydrogeologist and graciously she is an expert on the subject of DNAPLs.

These are very good questions. Can you address this?

MS. DAVIES: I'd be happy to. Underneath the surface near here is fractured rock. So it's rock with very small fractures in them and some bigger and sort of dispersed.

THE AUDIENCE: Will you please use the microphone?

MS. DAVIES: Underneath the surface of the Bally Site is fractured rock, what you might see on the outcrop down on the roads. And it's those rocks in layers with fractures running through them. When the contamination is spilled or piles on the ground, disposed of on the ground, these DNAPLs, they're separate phase liquids and they'll sink due to gravity as far down as their material that feeds them. When you spill something on a table there's that finite distance that that amount of liquid goes. Unless you keep adding to it, it will stop. It's the same idea with these heavier-than-water degreasing chemicals.

What happens, the degreaser, which was TCE, trichloroethylene, was used until the mid '70s. Then it became evident it may be a problem to use because of its toxicity. People used 1,1,1-trichloroethane. They felt it was safer to use. The difference between TCE and the 1,1,1-TCA is they're different kinds of chemicals. And 1,1,1-TCA needed a stabilizer, something to keep it from reacting. And the stabilizer is the 1,4-dioxane. So the 1,4-dioxane can dissolve out of the 1,1,1-TCA and continue to move. And it does not like to be absorbed onto organic matter. That's why they can't strip it.

When you were using the volatile organics, they moved out of the liquid by the water and into the air and captured by the carbon units. But the 1,4-dioxane doesn't volatilize. So it stays in the water and that's why it was still present in the Bally drinking water supply. The volatiles were stripped and treated. The 1,4-dioxane continued to be there.

THE AUDIENCE: The other four or five volatile organic chemicals, they don't pose any threat to people?

MR. CRÒN: No, we take periodic samples of Municipal Well 3, the water that comes from there. And it's confirmed that it's coming out with

the air stripper. It removes the VOCs completely. 1,4-dioxane is not removed by the air strippers. That's why we're here tonight.

THE AUDIENCE: Is some of that contamination coming from the Crossley Farm?

MR. CRON: I'm going to throw her that question.

MS. DAVIES: I'm actually not the Site hydro, but I've been helping with the Site. I am familiar with it.

The contamination is not related in terms of coming and commingling in the ground. It's not the same plume of contamination. The plume of contamination associated with the Bally Site was contamination that was spilled or somehow disposed of within the Site boundaries. And then most likely -- I think the question about the DNAPLs was a good question because most likely it does enter the ground as a separate phase chemical that hangs out in the fractures and as the groundwater moves past it it dissolves and makes this plume of contamination. And although we haven't actually seen DNAPLs, we like to use multiple lines of evidence, try to figure out how long the plume has been there, what kind of concentration. We look at a different sort of evidence to see if potential

probably exists, and by pitching Municipal Well 3 we maintain control for that groundwater plume. It can't get past the well because they're taking water out and treating it.

MR. CRON: That's a good question. Crossley Farm Superfund is close by. The contamination is not from the ground water contamination at that site.

THE AUDIENCE: Is the Crossley Farm the same contaminants?

MR. CRON: Some of it is. The actual Crossley -- the contaminant came from the Bally Case and Cooler property. Some of the contaminants are. TCE is the big one.

MS. DAVIES: It does not have the 1,4-dioxane because what happens with the degreasing process is the chemicals vaporize and attach themselves to the metal and hit the cold metal and it drops back down. It's a distillation process. And since the 1,4-dioxane is not very volatile, it gets concentrated in the sludgy stuff. When that's disposed of that's called still bottom. Maybe there's a potential for 1,4-dioxane and that's what sort of led us to look at it here.

MR. CRON: 1,4-dioxane, I wanted to

prepare a slide to give you a brief summary. It is a solvent stabilizer associated with the degreasing agent trichloroethylene. The oils and the actual solvents decompose. They create hydrochloric acid. If that's not dealt with it can corrode the part you're cleaning and your cleaning equipment. You have to have something to neutralize the acid. Those are called trichloroethylene.

1,4-dioxane has been classified by the EPA as a probable human carcinogen. There is no immediate human health risk from 1,4-dioxane, but based upon animal studies performed EPA classified it as a probable human carcinogen.

Concentration has varied over the past four years from 24 parts per billion to 77 parts per billion. As we indicated previously, the concentration does not represent an immediate or short-term threat to human health. However, based on 1,4-dioxane as a probable human carcinogen there may be potential for long-term human health effects.

The EPA seeks to address this through the implementation of response action, which in this case our preferred response is the installing of that new well.

THE AUDIENCE: What does the billion

represent?

MR. CRON: 24 parts per billion.

THE AUDIENCE: What?

MR. CRON: Billion parts of water. A very, very low concentration. This is the history. The initial response in 2003, in February, March of 2003, the PRP began to provide bottled water to any user of the public who wanted to limit their exposure.

In September 2003 EPA and the PRP entered into an administrative order and consent, a legal agreement, wherein the PRP agreed to do three basic things: A, agreed to perform a Feasibility Study, what was the best way to remove the 1,4-dioxane; B, monitor Municipal Well 3 for 1,4-dioxane concentrations to see if it changed, and C, they agreed to continue to provide bottled water to residents until the situation was resolved.

THE AUDIENCE: Who are these PRP and why are they doing this?

MR. CRON: PRP perform environmental investigation and cleanups at the Site because they have some legal relationship to the property itself. The PRP at this Site is a very complex legal matter. The company was Bally Case and Cooler and Bally Engineered Structures. Those are names I know I can

comprehend. I've seen the stationery. Bally Engineered Structures and the Sunbeam family of companies are related. And the PRPs for this Site are broadly companies related to the Sunbeam family of companies. They are performing environmental investigation and cleanup because they have some legal relationship to Bally Engineered Structures.

THE AUDIENCE: Is it absolutely safe to wash your dishes and take showers?

MR. CRON: Yes, it is. It is absolutely safe for washing, cooking, cleaning. The concentration -- because 1,4-dioxane is a probable human carcinogen, it represents a potential or very low increase in one's lifetime of cancer risk. That risk, as small as that risk is, it's caused by ingestion. To use it as wash water, dish water, that's correct.

THE AUDIENCE: Has anybody done a sampling to see if the cancer rates are higher than normal?

MR. CRON: That came up in a newspaper article and the same question came up in 2003. In 2003 we had a gentleman, Tom Stukus. Tom was with the Agency for Toxic Substances and Disease Registry. And they're sort of the sister agency of the EPA who know toxicology, health effects, that kind of

thing.

At the time the same question came up in the community and Tom provided the name and information for two gentlemen at the Pennsylvania Department of Health. I have the same information tonight. Tom indicated at that time that if there was interest in having that kind of evaluation performed, the Pennsylvania Department of Health would perform that type of evaluation. Subsequent to that, Tom has retired. We reviewed Tom's files. He did follow up with the Pennsylvania Department of Health. No request was put forward to perform that evaluation.

To the best of my knowledge, no, that sort of evaluation has not been performed.

THE AUDIENCE: Who would come forward to do that?

MR. CRON: The Borough, a private citizen. There are a lot of options. I can provide that to you tonight. I brought that information.

THE AUDIENCE: You're saying it's a probable. That would be an indication, yeah, it's secondary?

MR. CRON: I don't want to discount the concern of EPA for this situation. We're concerned about this. We take the Site and the situation very,

very seriously. That's why the PRP performed the Feasibility Study and selected a response action we feel would be the most protective response action.

THE AUDIENCE: You have 20 years of history here.

MR. CRON: That's correct. I agree with you.

THE AUDIENCE: I was going to say, cancer is a reportable disease. So there should be and there are records. Just the record for Berks County was in the Reading Eagle several weeks ago regarding the incidence of cancer and separated by municipality. You can find whether it's within the norm or outside the norm by looking at those. And then if there's an alarming number maybe that's where you go.

MR. CRON: I have the names and numbers of the two gentlemen, the Department of Epidemiology and Director of Environmental Health. And I can provide that information for anyone.

Next slide. As I indicated, the PRP performed the Feasibility Study. There were two basic options. Option one, installation of a new well in an uncontaminated site. Option two, addition of another treatment system to the current well to treat the 1,4-dioxane.

THE AUDIENCE: Why did it take four years to get that?

MR. CRON: It's 100 percent legitimate question. It deserves to be answered. It will be. The Feasibility Study is complete. Over the past four years, five well sites have been investigated by the PRP, and an appropriate new well site has been located. In addition, the treatment option was evaluated by the PRP under EPA oversight.

Broadly, the treatment was evaluated in two ways. The first PRP study did a literature review and vendor review to look for technology. They boiled the universe down to two treatment technologies. They're both oxidizing technology, which is ozone as oxidizing and a hydrogen peroxide and ultraviolet light to break down the 1,4-dioxane to acceptable levels.

The PRP actually collected water samples and provided those samples, one, to a treatment vendor and, two, to a university to perform in-laboratory tests of these two technologies to see how well they perform, how well they broke down 1,4-dioxane and if any kind of toxic by-product was produced.

Feasibility, why did this take so long? I had a lot of time to think about this. It's a

question I knew I would receive. It's a hundred percent legitimate and I want to answer.

The treatment option was substantially complete by July of 2003, approximately six months after our meeting. Review of the treatment options wasn't hard to do. Everything was under PRP with EPA oversight, it was to talk to vendors, to see other people's experiences, etc. It was also under our control to gather water samples to send them to vendors and university to do testing. The actual review of the material was substantially complete in the summer of 2003.

The new well option was much more difficult than we originally anticipated. I've had a lot of time to think about this. I think the difficulty boiled down to hydrogeology, where water is present beneath the earth and private property, who owns the land. Basically I've written on the slide these are my thoughts on that. We needed a land owner who had a lot of acres. We needed quite a few acres. B, they had to have the land and good potential for water beneath the land, a lot of water. A good location for a public water supply well. A lot of land with a lot of water. And the third part is one of the hardest parts, not only the land and water but an owner who is willing to

help us solve this and sell us a portion of the land. It did take four years. I think it was worth the wait. The fifth well site is by far the most superior well site. Excellent quality of water, excellent quantity and is well protected from the Bally plume. I think at the end of the day we've got the best solution now.

THE AUDIENCE: How deep is the Number 3 Well?

MR. CRON: The Number 3 Well I believe is over 300 feet deep.

THE AUDIENCE: The new well is 400 feet deep. Is that going to draw the plume that direction?

MR. CRON: We evaluated that question very carefully. Based on a nine day test, the new well site was pumped for nine days. Over those nine days the PRP, EPA, DEP observed how water levels responded to the pumping of that well. Based upon that pumping test we do not expect the plume to move near the new well. We expect it to remain isolated from the new well.

THE AUDIENCE: What about the consideration for the surface water that's near the well and are there still negotiations with any of those parties yet?

MR. CRON: I'm going to address the private wells first. I will research this on behalf of those neighbors. I'll find out the answer to this.

THE AUDIENCE: There is draw down. We know that from the test that was done. Those homeowners are without water when you run the test. There is no evaluation, to my understanding, that was done down in that stream. If it was it was done without permission. And third of all, there's easement issues that have never been addressed with land owners that have been brought to their attention and nobody has addressed them. You're looking at a solution after four years and still looking at problems.

MR. CRON: I'll personally work with the neighbors to make sure we tackle these problems and work this out to the greatest extent possible so people are satisfied with the solution. My understanding of Pennsylvania Water Law, if a private well owner is impacted by the long-term operation it will not be their problem. It will be our problem. If the long-term operation impacts somebody's well we'll make it right and find a way to get it fixed.

The surface water question is tough. We have a PRP representative, the engineer.

Mike, can you describe what kind of

work you've done for the impact and what kind of evaluation you will perform to see if the operation of the new well will have an adverse effect?

THE ENGINEER: I can give a quick version. During the water test that was conducted that Mitch alluded to, it was pumped for nine days. During that test we monitored what we call piezometers, which are shallow monitoring wells, certainly in the wetlands and in a stream in a ditch nearby.

THE AUDIENCE: We monitored the stream at a couple of locations right along Route 100.

THE ENGINEER: Sometimes I forget all the details. Anyway, we looked at piezometers, which are shallow wells so to speak, to find out what's going on in the surface as well as we monitored the flow in the stream. That's what we did during the test.

For a well like ours Pennsylvania Environmental Protection requires the first six months of the operation you have to look at certain parameters to surface water infiltration protocol. It's belt and suspenders. The next step then once you operate then you verify for a certain period of time you're not pulling in surface water.

MR. CRON: During the test you did

evaluate the surface and we did not observe any impact.

THE ENGINEER: Not only did we evaluate, we found there was no impact.

MR. CRON: That evaluation will continue during an actual construction and operation of a well.

The residential well question is a very good question, very pertinent and legitimate. Let me know who's nearby to the well site, the names, addresses, the concerns and we'll work on this.

THE AUDIENCE: They should know the draw down. They should have known. I shouldn't have to be telling you anything. They should tell you.

MR. CRON: I understand your question. It's very clear. I understand the question. I'll work on that.

All right. So the Feasibility Study was prepared and reviewed by EPA. It's a boiler plate slide. When EPA reviews a feasibility we look at certain criteria. There are the thresholds it has to meet, these two top criteria. It has to be overall protective of human health and environment and applicable or appropriate and meet relevant requirements. So there's a lot of legalities that go

into that. What it basically means, local, state and environmental, location, protective of human health and environment.

There's then five balancing criteria. The long-term effectiveness of a remedy. Will it be effective over decades? Reduction of toxicity. Does the remedy incorporate treatment? Short-term effectiveness. How quickly to implement? Are there specific problems or advantages to implementing a remedy, local vendors of technology, etc.? And cost, what are the relative costs to implementing a remedy?

Modifying criteria, state acceptance. Does that state, the State of Pennsylvania, do they accept, does the community accept the remedy? Do they have problems with the remedy? These are considered by EPA in reviewing and selecting remedies for Superfund Sites.

So this gives us, you know, some broad picture. I wanted to do slides on the comparison on the two alternatives, the new well and the treatment.

The new well had advantages and disadvantages. The well site is in an uncontaminated location. It's not contaminated by the Superfund Site.

THE AUDIENCE: When you make the

statement well site identified in uncontaminated area, have you considered 500 yards east was pumped?

MR. CRON: We did hear about that.

THE AUDIENCE: It's not something you hear about it. It's a fact.

MR. CRON: I understand your question. We sampled that well site at the beginning of the pumping and nine days in we did not see any evidence of chemical contamination in that area. We sampled monitoring wells near the Site. It was a concern. It was evaluated, and we did not identify contamination in that area.

Just to run through the well site. It's in an uncontaminated area. It does not require any special form of treatment or environmental connotation and the hydrogeology protects that from the contamination plume. It's in a good location for protection from the Bally plume.

In terms of disadvantages, there may be access issues to private property. It's not a huge disadvantage, a little. It will take some time to do that.

Now, comparison of alternatives. The big one, there's no special access required. The well site lies on public property. We can go up there at any

time with permission from the Borough of Bally and construct pilot treatment systems. So access is very easy to that site.

As I indicated previously, there's two what I consider to be major disadvantages of additional treatment. The first one is there's a potential for 1,4-dioxane at very low concentration to break through a treatment system. There's not evidence that 1,4-dioxane can be reliably reduced all the time and that's a concern in the context of a public water supply. And the other concern is during the actual in-laboratory testing that the PRP performed under EPA oversight, as I indicated previously toxic by-products produced aldehydes and bromate. Those two disadvantages.

THE AUDIENCE: How long will the plume that's there now, how long is that going to be -- how long will it take for the contamination to work its way out or be drawn out?

MR. CRON: I asked myself that same question. I'm thinking in the context of decades. It's going to take time.

THE AUDIENCE: When you have this new well on line, is that going to be the only water source?

MR. CRON: That would be the only water source for Bally.

THE AUDIENCE: Are you going to have to keep pumping so the plume don't move?

MR. CRON: That's correct.

THE AUDIENCE: You're not going to fix it?

MR. CRON: No.

THE AUDIENCE: The reservoir up there isn't used anymore?

MR. CRON: My understanding is it's a concrete reservoir.

THE AUDIENCE: The spring --

MR. CRON: That's no longer used. It was discontinued in approximately '89. It's for head pressure. It keeps the pressure on the water system.

THE AUDIENCE: Were the lagoons ever excavated down to 30, 40 feet?

MR. CRON: On the Site itself?

THE AUDIENCE: Yes.

MR. CRON: I think they were backfilled and constructed over. That was back in the '60s or '70s, many years ago.

THE AUDIENCE: Are there any aerial photos?

MR. CRON: Yes, there are.

THE AUDIENCE: Where?

MR. CRON: The Bally Case and Cooler property approximately in the middle of the Site itself. Those lagoons, you know, to my knowledge were backfilled and constructed over. That's many years ago, maybe 40 or 50 years ago.

THE AUDIENCE: I know when I was a teenager there was one straight out the street and across the pond where the -- it's like a pond now, just a stream.

THE AUDIENCE: That was a mill pond.

MR. CRON: A mill pond?

THE AUDIENCE: That was the mill pond. There was a chemical pond, across from the pond there was a cornfield, a pond. You can see where the pond was and then there was a cornfield and then over before Bally Case there was a lagoon there with chemicals in it. They used to chase us away from it but you could still see it.

MR. CRON: Let's talk afterward. I would like to hear more about that.

Yes, sir.

THE AUDIENCE: What are you going to do to control development?

MR. CRON: The PRP has arranged to purchase a certain acreage of property to control development. There are state requirements for how much land you need to yield a certain amount of water. A certain amount of land has not been acquired but an agreement has been.

THE AUDIENCE: Once you switch to a new well will the PRP maintain responsibility?

MR. CRON: For the new well, very interesting legal question. The PRP and the Borough of Bally are working on an agreement for that. In my view the decision document that EPA will eventually write will contain language that reads a certain quantity of water and a certain quality is required. So if the new well should exhibit a lesser quality or quantity, I believe the EPA can look to the PRP to resolve it.

THE AUDIENCE: The community will be responsible for running two wells, the additional expense will be to the community?

MR. CRON: I don't believe so. The community will become responsible. The existing well will be the extraction and the PRPs themselves will be responsible for that one.

THE AUDIENCE: Are you saying that the new well will be the community's responsibility

even if it's polluted?

MR. CRON: No. In terms of operation and maintenance but not in terms of pollution, no.

Feasibility Study, EPA comparison of the two alternatives, and once again to get back to this, this is the EPA preferred alternative. The preferred alternative is the installation of the new well. Having reviewed the Feasibility Study overall in terms of human health, the new well would be the superior alternative. It will provide the Borough with adequate quantity and quality.

The construction of the well house and water pipeline, well equipment must be purchased. The time frame to complete that is approximately one year. In addition, as part of the EPA's preferred alternate action groundwater monitoring will be updated. The monitoring will include wells between the plume and the new well, which will be periodically sampled and analyzed to confirm that the contamination plume is staying in the plume. If the contamination plume, which we don't expect to happen, but if it does move into the well we'll have a contingency plan to stop the Bally plume from impacting the new well.

There's the three components, the new well, upgraded groundwater monitoring and contingency

plan.

THE AUDIENCE: I have two questions. My first is sort of a comment. You had said previously that there would be no contamination, that the plume would not contaminate the new well. Now you're saying there's a contingency. If there's a chance what is the contingency?

MR. CRON: We don't want to say never. We're saying that we're going to check. We want to check and have some safety catches in place. We want to have wells between the plume and the new well to confirm what we believe is true, that that plume will not move towards the new well. And we also want to plan in advance. If in fact contrary to our expectations the plume does in fact appear to be moving, we wanted to have a plan in place that we can implement to stop it from moving. It might be the installing of another extraction well between the new well and existing plume. The details of the contingency have got to be worked out. We have to have some kind of plan in place. What do we do if, just for safety.

THE AUDIENCE: How far is the old well from the source of contamination and how far is the new well going to be from the source of the contamination?

MR. CRON: The old well from the source is at most 200 yards. The new well from the source of contamination, I would estimate to be a little over a mile, perhaps a mile. A substantial distance. Perhaps three-quarters of a mile. A very large distance.

THE AUDIENCE: Certainly a larger distance.

MR. CRON: Absolutely.

THE AUDIENCE: Are our water lines, are they contaminated by dioxane moving through it all the time?

MR. CRON: Dioxane maintains solubility in water. It does not affix to lines. Once the new well is on line and the old well off, the dioxane will clean up and will be eliminated from the system.

THE AUDIENCE: What happens if the Bally area goes through a substantial housing boom?

MR. CRON: I understand your question. We've considered that. Right now the Bally Public Water System uses approximately 120 gallons per minute. The new well will be capable of producing 300 gallons per minute. Much more than is currently used. We feel that cushion provides for a substantial growth

and it will meet the Borough's needs.

THE AUDIENCE: Will the well be pumping at 300 gallons whenever it's pumping?

MR. CRON: It won't be necessary. The well will pump as much as the Borough needs.

THE AUDIENCE: In the event of a fire would the well be capable of -- I work for Bally Ribbon. It's a large facility. We pay for an insurance surcharge because we don't have enough water flow in the pipes in the event of a fire. If you have a smaller well pump that's going to be another detriment to us.

MR. CRON: That's something to consider. Yes, sir.

THE AUDIENCE: The piping that supplies water determines how much water pressure and the flow through the pipe, not the pump. The pump pumps it to the reservoir and it's pressurized to the system.

THE AUDIENCE: The Borough did a study several years ago, which we helped fund. The well-being on that side of town, some of the water would come from the reservoir and some from the pumps. Together they would determine the gallons per minute and that's what the insurance carrier is looking at. You have to have minimal pressure and gallons per minute.

MR. CRON: Thank you for that comment. We will consider that.

The second to last line is this, there's a public involvement as part of Superfund remedy selection. EPA will collect public comment on EPA's preferred alternative, which is the installing of a new well. We will review the comments and provide a response in a specific document. The document is called a Responsiveness Summary. That summary will be an appendix to EPA's decision document for this Site which is a Record of Decision. In this case it's going to be a Record of Decision Amendment, an amendment to the original decision in 1989. The public comment for EPA's preferred alternative is March 13 to April 11.

On the next slide, you can contact me in a lot of different ways. You can call me. You can write me a letter. You can write me an e-mail, whatever you want to do. After the presentation you can make your public comments now.

THE AUDIENCE: There's a major development, housing project down Route 100 between Bally and Boyertown. Will that impact this at all?

MR. CRON: I don't believe so. I do know about that. I had heard about that. We looked at that. I don't believe that will have an impact on the

new well for the Borough.

THE AUDIENCE: Is there a buffer zone around a Superfund Site? Do you understand my question?

MR. CRON: Like?

THE AUDIENCE: I think of this everyday. I have three children. I walk out and there's Bally Case and Cooler. And I just -- I cannot believe how someone would get permission to build on a Superfund Site, if that's the case, and how that would not have to be disclosed to the people buying the house.

MR. CRON: Let's talk about this. Let me get your name and number and let's talk about this specifically. I have to talk to the office of regional counsel, what kind of real estate law.

THE AUDIENCE: For all intents we are on top of that place. I hear the gentleman talking about there used to be a pond with chemicals and it got bulldozed over. I -- I don't know what's going on.

MR. CRON: Give me a name and number. We'll track it down.

THE AUDIENCE: What other chemicals are there we don't know about living that close?

MR. CRON: I hear you loud and clear and understand your frustration.

THE AUDIENCE: Give us a time line when the Record of Decision Amendment is completed. When is this all going to take place? When is this all going to happen?

MR. CRON: The question is regarding the time frame. The comment period is through April 11, and it kind of depends -- it depends how many public comments EPA receives and what kind of comments EPA receives. They have to sit down, go through the comments, see how we want to respond and see if they change our opinion on the preferred alternative. At least 30 days to respond to public comment. That's May 11. And approximately 30 days to get that amendment. That's June 11.

I think by the middle of June we'll have the official EPA decision document out there with the Responsiveness Summary. I want to get it done and I will focus on this.

THE AUDIENCE: I don't think the citizens want to wait another four years.

MR. CRON: I couldn't agree with you more.

THE AUDIENCE: I would like to add my comment to the gentleman about Ribbon Mill water pressure. I'd like the Bally Water and the Washington

Township Water Authority to consider another tower. I live in Victoria Village and when the fire companies, when they pump we lose complete water pressure. In fact, it sounds like a vacuum. I'd like to put that on public record. I would like that Water Authority to consider this. That's a health hazard when it siphons back into the system.

THE AUDIENCE: Have our wells been tested to see if this plume is in any private well?

MR. CRON: They have performed a certain series of monitoring wells inside the Bally Borough. We know the extent inside the Borough of Bally and we have sampled private wells to confirm they have not been contaminated and that's been our conclusion.

THE AUDIENCE: I know you said there's no problems with shower or laundry. Water in our eyes, is that a concern?

MR. CRON: No, ma'am. Absolutely not. No. The concentration of 1,4-dioxane present in the public water system is very low. They do not present any immediate or short-term threat to human health whatsoever. Because 1,4-dioxane is classified as a probable human carcinogen there is a potential long-term threat to human health that we want to

address via the response action, in this case the new municipal supply well.

THE AUDIENCE: About the treatment well or the treatment of the well, Number 3, you're having other hearings regarding that?

MR. CRON: That's correct.

THE AUDIENCE: When is that scheduled?

MR. CRON: In the near future. EPA is at the beginning of the process. For the new municipal well we want to complete this response action, not the whole thing but the agency decision on this and then focus on that question, where should the extraction well be discharged, what's the best discharge location. We will perform public hearings on that.

THE AUDIENCE: I think I want to correct the gentleman. When they pump out that fire hydrant I believe that's Bally's water system. There is no water system in Washington Township. There is only a sewer that runs down Route 100.

THE AUDIENCE: It is on the Bally -- the bill is via Washington Township.

THE AUDIENCE: They collect from you, buddy, a thousand bucks a year for sewer.

MR. CRON: If you have any questions

and you want to come talk to me, I'll be here. Otherwise that's the presentation I have tonight.

Thank you for your time.

MS. WALLS: I'd like to thank you for coming. Our comment period ends midnight April 11. And also when our Responsiveness Summary will be available we'll send another flyer out to your homes.

Thank you and good night.

(The hearing concluded at 7:45 p.m.)

4/9, 2007

I hereby certify that the evidence and proceedings are contained fully and accurately in the notes taken by me of the hearing, and that this is a correct transcript of the same.

Stacie Burns
Notary Public